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THE AUSTRIAN THEORY OF VALUE.

In an article headed "Boehm-Bawerk on Value and Wages," published in the *Quarterly Journal of Economics*, October, 1890, I ventured to give some reasons for regarding the marginal utility theory of value as insufficient and unsound. Professor von Wieser, of the German University of Prague, has presented a paper to the Academy, containing a defence of the new theory.* In part his paper is a reply to my objections ; in part it is a criticism of the classical theory. I have read and pondered very carefully all that the learned professor has so skillfully urged in behalf of the new doctrine ; but I find myself wholly unable to perceive that, here or elsewhere, a good case has been made out for it. With the kind permission of the editors of the ANNALS, I propose to review, as briefly as possible, the main points at issue between the two theories. And, before entering on the subject, I wish to say that there is so much that is good and admirable, so much real light and instruction, to be found in the writings of the Austrian economists, that it would be a much more agreeable task to dwell on the points in which I am in full agreement with them, than to call attention to the errors into which they seem to me to have fallen. Further, in the practical outcome, their theories, so far as I see, do not lead to results that conflict with those reached by the classical school. While differing as to our modes of reasoning and our ways of stating our conclusions, I am unable to perceive that the Austrian economists differ in substance from the older school in their way of regarding the practical problems that vex our time. Both schools are at one in their rejection of the crude and shallow vagaries that have been advanced from so many quarters of late, as new economic gospel. While, then, we argue out, frankly and fully, our points of theoretic divergence, we must not

* Printed in the ANNALS, March, 1892.

forget our substantial agreement as to those weightier matters which make economic theory worth discussing at all. I am not without hope that the Austrian economists, on fuller consideration of the whole matter, may see reason to modify their present view as to the influence of marginal utility in the determination of value; and that the outcome of their brilliant activity may prove to be, even in their own judgment, not an overturning of the accepted doctrine, but a needful improvement and illumination of a previously neglected portion of it.

The points in controversy between the Austrian economists and the adherents of the classical school are reducible, I think, to these two questions: (1) What is the proper definition of cost of production? (2) How shall we account for the observed correspondence between cost of production and exchange value? The Austrian economists answer these questions in a new way. If it can be shown that their answers do not bear critical examination, we shall have made a long step toward showing that the principle of marginal utility has a much more restricted action in relation to value than they have supposed. The questions involved go to the very foundations of economic theory, and call for much patient reflection on the part of readers as well as writers. Let us first consider the question of the true nature and necessary elements of cost of production.

I. THE CLASSICAL VIEW OF COST.

One who undertakes to defend the classical conception of cost is under the disadvantage of not being able to give a definition of cost that can claim universal acceptance among classical economists. Dr. von Wieser seems to imagine that we all agree with Ricardo in reducing cost, in the final analysis, to labor alone. In that he is, of course, entirely mistaken. We are practically unanimous in holding that economic cost includes something more than mere labor. But what the further element may be, how to name it and

how to treat it, must be admitted to be unsettled questions among us. This being so, it must be understood that, in what I have to say as to this further element, I cannot lay claim to a consensus of classical authority behind me.

There are obviously two ways of looking at cost. We may regard productive industry from the standpoint of the employing class, and think of cost as measured by their payments. Or, secondly, we may think of the whole community as exerting itself in appropriate ways for the production of commodities, and may think of these necessary exertions as constituting the real cost of the things produced. The first of these views we may call the employer's view of cost ; the other has been called the economic or scientific view. The first step toward a correct conception of cost is, in my opinion, to get clear ideas as to the difference between these two views. Some discussion of the matter is made necessary in the present case, because Dr. von Wieser fails to apprehend the classical account of economic cost, and adopts, on his own part, a view that is closely allied to, if not at bottom identical with, the employer's conception of cost.

The employer looks on cost of production from a purely personal standpoint. For him cost is a question of payments : of outlay for necessary buildings, machinery, materials and labor. By careful book-keeping he can tell with approximate accuracy how much each unit of product costs him. With this as a basis, he can readily tell how much profit can be made by selling his product at any given price. And this, I need hardly say, is his primary interest in the whole question. In his view cost is lowered quite as effectually by a fall in the wages of his laborers as by an improvement in machinery, or the discovery of more prolific sources of materials. Cost is raised, in his estimation, when for any cause his own necessary outlay is increased, even though the whole increase go merely to swell the rewards of others engaged, equally with himself, in the production of the commodity.

The mass of mankind has clearly an interest in the cost of production of commodities that finds little recognition in the employer's way of looking at the matter. The economic view of cost must recognize this interest. It can do so only by taking the broadly human point of view: by ignoring the division of men into employers and laborers, and making cost of production a question of the whole exertion or sacrifice men have to undergo in order to produce the various commodities they need. In this view we are to direct our attention solely to the process of production itself, ignoring wholly the arrangements men have made between themselves as to the ownership of the product when completed, or the individual compensations for shares borne in the total cost of it. We are to have no thought of employers as such, but only of the labor of direction and oversight; no thought of hiring and wages, but only of laborers exerting themselves in appropriate ways for the production of enjoyable commodities. From this point of view we should say that anything which affects the ease or difficulty of the whole task of producing each commodity, affects its cost of production; and that nothing does affect the cost of production, which does not affect the ease or difficulty of the whole task.

As between these two views of cost, I can hardly imagine an economist hesitating in his choice. The one is limited and artificial. It seems to regard production as, primarily, a field for making profits. Further, as the individual employer commonly manages but one stage in the whole process of producing each commodity, this view has the defect of not taking the whole process into account in considering the cost of production. The other view is as broad as production itself. It brings us face to face with the original elements of cost in the very nature of the productive process. This, it is needless to remark, is a point of no small importance for scientific purposes. If we accept the employer's view of cost, we rest on payments between man and man, which doubtless have reference to shares borne in the

natural cost of production, but are at best only business valuations of this or that fraction of the natural cost. If, on the other hand, we base our theory of cost on the difficulties of the productive process in itself, we are in no danger of finding that our assumed elements of cost are, in fact, resolvable into more simple and fundamental elements back of them.

What, then, are the ultimate elements of the natural cost of producing commodities? All agree, I think, in regarding the necessary labor of all sorts as the chief element; though, as we shall see presently, the Austrian economists ask us to count, not the labor itself, but the "value" of it, as a constituent of cost. English and American economists, so far as I am acquainted with their views, differ only as to the range or extension to be given to the term labor as an element in the cost of each commodity. Some of them seem to have in mind only the labor applied at the last stage of the process in each case. When, for example, they speak of labor as an element in the cost of production of coats, they seem to think only of the tailor's labor, and perhaps of the weaver's also. But it is difficult to see how such a limitation of the term is to be justified. Certainly, if we look at the nature of production as a whole, we shall find no reason for making any difference, in this regard, between the labor of the tailor and that of the spinner, or of the dyer, or of the wool-grower. Unless we are prepared to say that coats can be made without wool, and without woollen yarn, we are in all reason bound to include all these labors as parts of the labor of producing coats. Nor is this all. Unless we are prepared to say that wool can be spun into yarn without spinning machines, and that yarn can be woven into cloth without looms, we are equally bound in reason to include in the labor of producing coats the labor of providing requisite machinery for carrying on the various parts or stages of the whole process. What good reason can be given for stopping short at any point in the whole process,

or for excluding from our definition of cost any part of the labor that contributes, directly or indirectly, to the final enjoyable commodity, a coat? The fear that we may seem to say that labor is the sole element of cost, and may thereby concede a dangerous advantage to the disciples of Karl Marx? Surely not. Science can have no fears; must accept all the facts just as it finds them. Let us, then, when we name labor as an element in the cost of production of any commodity, admit freely the whole labor of all sorts from beginning to end.

If, then, we use the word labor in our definition of cost, understanding it to include all the labor, what further burden or sacrifice is there that men have to undergo in the production of enjoyable commodities? All reasonable men perceive that there is a further element; the difficulty is to agree as to its precise nature. The more common practice of English and American economists, in recent years, has been to regard the abstinence of the capitalists as the other element. I have elsewhere given some reasons for thinking this practice to be inadmissible.* As Dr. von Wieser seems to agree with me in rejecting abstinence as an element in cost, I need not here repeat those reasons. If we only look at the processes of production as they go forward, we can hardly fail to recognize the missing factor in cost. The whole process of producing nearly every enjoyable commodity is very far from being a single and simple exertion of labor. It is, in most cases, a series of operations, necessarily extending over a considerable stretch of time. Partly, this is due to nature's way of doing her share of the work; she takes time to mature the fruits of human labor. Not all the men in Europe could produce a grain of wheat, or a quarter of beef, or a pound of wool, by a month of assiduous labor: nature has her own way of yielding such things, and it is a way that takes time. In part, also, the delays of production are due to men's own

* *Quarterly Journal of Economics*, July, 1887; also in my "*Working Principles*," p. 387.

need of time for doing their share of the work ; very largely they are due to the fact that so great a proportion of the whole labor of producing things has to be applied to the preparation of the natural agents, to the erection of necessary buildings, the making of requisite machinery, etc. It is patent on the very face of things that the industrial system of a civilized country represents an enormous mass of labor already expended, which has not yet produced its full enjoyable result. It is equally clear that the maintenance of such a system requires every day the expenditure of great quantities of labor in ways which, by the nature of the case, must be long in yielding enjoyable returns.

Now, if men were quite indifferent whether they got the enjoyable products of their labor to-day or years hence, this need of time in production would not be burdensome ; the whole natural cost of production would then consist of labor alone. But human beings are very far indeed from being thus indifferent. So far as the necessities of life are concerned, of course delay is impossible : actual wants must be supplied *now*. But when actual necessities are provided for, desires for material comforts, almost as urgent as absolute wants, clamor for immediate satisfaction. This human impatience for speedy enjoyment of good things makes the necessary slowness of production a burdensome feature of it. Indeed most men seem to shrink from the necessary waiting even more than from necessary labor itself. They are ready enough to work for immediate returns, but the distant natural return for productive labor fails to attract them. They are not willing "to labor and to wait."

These two sacrifices, that of labor and that of waiting, seem therefore to stand on the same level as elements of cost of production. They are both demanded by the very nature of production and the physical laws under which it must be carried on. They are both simple and primary sacrifices, not in the least due to any merely business arrangements between men, nor can they be evaded by any human contrivance.

Further, I think it is easily demonstrable that, taken together, these two sacrifices constitute the whole cost of producing commodities. It could be shown by experiment if need be. Given men who have the requisite knowledge, the requisite idea, production of all sorts is possible for them, if only they are ready to work, and to wait for the natural product of their work until the process of production yields it. Nothing more is needed, because nature's terms demand nothing more. If this be true, are we not justified in saying that the original and ultimate elements of cost of production are labor and waiting?*

The relation of natural cost to employer's cost must be obvious to every one who bears in mind the feature of modern industry that goes under the name of "combination" of labor. In truth the whole industrial system is a scheme of combination of labor. Nearly every commodity is a product of many different kinds of labor, combined and converging toward the final enjoyable result. The employer who stands at the closing stage, and is to own the commodity when completed, must of course pay for the labor and waiting that have already been devoted toward obtaining the product. This he does in the form of buying materials and machinery. The price he pays stands to him as cost. But it is a cost of acquisition, not the natural cost of producing the things bought. Strictly, the cost to him is the labor and waiting he spent for the thing he gives in exchange. The true cost of production of the commodity he is himself engaged upon, is the sum total of the various bits of labor and waiting contributed by all the persons who take part, directly or indirectly, in the production of it. The arrangements and payments these persons make among themselves in consideration of the part each bears in the whole burden, do not affect the nature of the burden itself. That remains, through all their

* Dr. von Wieser assumes throughout his paper that I reduce cost of production to labor alone. I hope that what is said above will make clear to him that he has misunderstood me in this respect.

arrangements, the two-fold task of necessary labor, followed by necessary waiting.

These considerations help us to see the exact function of abstinence in relation to production. The abstinence of capitalists comes into play to provide savings wherewith to pay wages, in advance of the natural yield of labor, to those who are unable or unwilling to submit to the long waiting demanded by the nature of production. Since wages are no part of the true cost of production, neither is abstinence; for abstinence has no function except to supply the means of paying producers in advance of the natural rewards of their exertions.

II. THE AUSTRIAN VIEW OF COST.

The Austrian economists seem to me to have made, as yet, no serious or systematic study of cost of production. It was hardly in the nature of things that they should do so. Classical economists dwell on cost because their whole system rests on it. But with the Austrians the case is different. They have no use for the doctrine of cost. They had indeed to find room for it in their system, because it could not be wholly ignored; but it seems to hold there the position rather of a foreign substance than of an essential element in the fabric. Dr. Karl Menger, the pioneer and acknowledged leader of the school, has not yet, so far as I am aware, incorporated any doctrine of cost into his treatment of value. Dr. von Boehm-Bawerk, and those other members of the school who discuss the action of cost, assign to it a very subordinate place. They admit the tendency of value to conform to cost, but explain this tendency as merely "a special case within the great law of marginal utility." A law of costs, as an independent and controlling principle, they do not seem to admit. Marginal utility they hold to be the primary and universal law governing the value of all valuable things. Their only concern with cost is to reconcile it with this other and greater law. If, now, it can be shown that they have thus far failed in effecting this

reconciliation, we shall have good reason for doubting the validity of their claims on behalf of marginal utility. That this can be shown I have no doubt, because it seems clear that cost, as they treat it, is not true cost at all.

Their definition of cost, to begin with, involves their theory of value. The cost of every commodity consists of the "value of the means of production" used up in producing it. By means of production, according to Dr. von Wieser, we are to understand such things as "common hand-labor, coal, wood, the commonest metals;" also land of the ordinary sort. Observe that, in his view, human labor is not in itself an element of cost; it is only its value that constitutes cost. But since, according to the Austrian theory, value is simply another word for marginal utility, and since mere means of production, such as labor, coal, iron, etc., have no direct utility of their own, they have no value of their own. They can be used, however, to produce useful commodities; they have, therefore, a derived or "attributed" utility equal to that of their potential products. The value thus acquired by the means of production constitutes and measures the cost of the commodities they are used to produce. For production does not merely create value; it also destroys value.* The elementary means of production, such as iron, coal, wood and common labor, have manifold uses. When any part of the general stock of them is applied to the production of any given article, as, for example, a kitchen range, the same part cannot be again used for producing nails or horseshoes or iron palings. Thus, "each productive process *costs*, and it costs exactly as much as the value which the material and labor required would have produced if rationally applied."†

This view of cost seems to me to be radically insufficient. It seems to say that the cost to us of what we produce is the loss of what we might have produced instead of it; that the

* Von Wieser, "*Der natürliche Werth*," p. 167.

† Von Wieser, "Theory of Value," *ANNALS*, Vol. ii, p. 618, March, 1892.

cost of the kitchen range consists in the lost value of the nails, horseshoes and palings we might have produced with the labor and materials that have been put into the range. That way of looking at cost seems to me to verge on the fanciful; to be, at all events, lacking in the simplicity and directness that ought to characterize a scientific definition. It has, however, other defects that are more serious. It has, in the first place, all the defects of the employer's view of cost. It asks us to forget those features of production that men necessarily feel as burdensome and costly. The irksome human exertions necessary to the production of kitchen ranges are not to be thought of as elements of cost. It is only the attributed *value* of those exertions that is to be taken into account. But the value of human labor, as the Austrians expound it, is simply the value of its potential product. Putting their two propositions together, we have the unavoidable result that the cost of commodities, as they explain it, is simply another word for the value of commodities. Cost and value, as they treat them, become indistinguishable. They set out with a value for each commodity fixed by marginal utility. The value so fixed for the commodity, or for the marginal member of each related group of commodities, fixes the value of the means requisite for producing the commodity. The value of the means constitutes, in turn, the cost of the commodity. But, in this circling and doubling, we obviously do not get beyond value—do not touch true cost at all. We deal only with the relations between wages, the values of machinery, partly wrought materials, etc., and the value of the completed product. All that the Austrian economists have urged as to these relations may be both true and important in its proper place. But it seems to me clear that no part of it can be received as reaching the subject of economic cost. Value may be a consequence and an evidence of cost of production; it can never be itself true cost to the producer.

We have only to consider the case a little to perceive the incongruity of the Austrian doctrine. The value of iron, for example, according to their view, is not only due to its fitness for making iron wares, but is fixed by the value of those wares (or of the marginal member or portion of them). Yet, when we proceed to develop this value of iron, by applying it to any of the uses which give it value, its value is at once transformed into cost. Iron has value, because it can be turned into ranges, nails, and ten thousand other things; but iron wares cost, because iron is valuable for making them. This seems a strange conception of cost. If we put it in another form, its strangeness becomes even more striking. Dr. von Wieser tells us that "cost is . . . measured by utility alone." That is to say, iron wares have utility for us; and iron, as a material for making them, has a derived or attributed utility equal to that of its potential products. But when we proceed to avail ourselves of this utility of iron, by actually converting it into any of the useful articles for the making of which it is so well adapted, its very suitability for our purpose becomes an item of cost to us. Its utility is at once advantageous and burdensome to us; burdensome and costly precisely because, and precisely so far as, it is advantageous to us.

Probably, Dr. von Wieser, seems to himself not to have maintained any such absurdity as this. In fact, he gives no sign of having considered cost in the general sense at all. His sole interest in cost is limited to the obvious necessity of establishing a *modus vivendi* of some sort between it and marginal utility; and, he seems to have too easily concluded that he had sufficiently dealt with cost when he had devised a treatment which applies, with an appearance of logical consistency, to the comparative costs of the various commodities to the employers. Cost, as he treats it, is made up of the value of those means of production that have manifold applications, such as iron, coal and common labor. The importance of manifold applicability as a quality of "cost-goods"

is readily seen. Dr. von Wieser evidently perceived the incongruity of asserting that the utility of iron for the making of nails, can be an item in the cost of production of nails. In his book on "Natural Value" (p. 168), he expressly guards himself against seeming to maintain this, by explaining that the value of any material which has but a single use, does not enter into the cost of the resulting commodity. The value of the commodity is indeed, here as in other cases, carried back by attribution to the means of producing it; but the value of the means does not, in this case, hold the relation of cost to the commodity. Here at least we can wholly agree with him. The strange thing is that his conclusion as to this case, had not led him to question the validity of his reasoning in the case of materials having manifold applications; had not raised a doubt in his mind whether utility can be in any case a true element of cost.

For how, on his system, does he wish us to conceive the cost of the whole group of related commodities, in the production of which any given material of manifold application comes into play? When he speaks of the value of iron as an item in the cost of production of nails, he asks us to think of the utility of iron for the production of axes, ranges, pots, and the many other iron wares. If the cost of production of axes be in question, we are to think of the utility of the requisite iron for the making of nails, etc. Put how of the cost of axes *and* nails, *and* all the other iron products? He will not, I suppose, deny the existence of cost in this general sense for all iron wares. How would he have us express it? What are its elements? Is it not obvious that the utility of iron holds to the whole group of iron products, precisely the same relation that the utility of the single-use material holds to the single resulting commodity? Is there not, therefore, the same fundamental objection to counting the utility of iron as an item in the cost of nails, as there is to counting the utility of Johannisberger grapes

in the cost of Johannisberger wine? Can utility be cost in any case, if we are to regard cost as something burdensome, and not merely as a blessing under a wrong name? It seems to me clear that it cannot be, and that Dr. von Wieser's effort to reconcile the marginal utility theory of value with the observed tendency of cost to control value, has fallen a good way short of success.

There are other features of his treatment that seem equally objectionable. Why, for example, does he ask us to begin our computation of cost with the value of coal, iron, wood, etc.? Coal in its native seam has no value; neither has iron in its original beds of ore. Nature does not give us coal in the furnace-room, nor iron in the form of pigs, nor wood dried and ready for the hand of the joiner. But neither does she hold her supplies of any material at a value against us. Men can have every material freely for the mere trouble of taking it. I cannot but regard it as a grave defect in Dr. von Wieser's treatment, that he does not begin his computation of cost at the beginning of each process of production. He seems to say that the labor of mining and smelting iron ores is no part of the process of producing iron wares. He takes up the reckoning of cost of iron products, when the process of producing them is already well advanced. What sound reason is there for throwing out of account the earlier labors in each process? Are they not a true and essential part of the process, entitled in every way to as full recognition as the labors of the later stages? Dr. von Wieser may perhaps have held that he gives those earlier labors sufficient recognition as elements of cost, when he includes the value of the materials they have produced. Here, however, we meet again the difficulty already pointed out; namely that value and cost are not interchangeable terms. If it be allowable to blot out, in our computation of cost, any part of the exertions by which commodities are produced, substituting in their place the value of the materials or machinery they have prepared, then I see no good reason

for stopping short in the substitution at the point selected by Dr. von Wieser. If it be legitimate to do it at all, there can be no valid reason for not carrying it out to the end, and dropping labor and waiting out of the account altogether. Indeed, on Dr. von Wieser's method I think it would not greatly matter. If the element of cost be not the labor itself, but the value of it, or the value of the other thing or things it might have produced, then it does not seem to matter which course, or what combination of both courses, we choose to follow. Either proceeding robs cost of all independent significance; turns it into a mere reflection of value, and reduces cost in the general sense to a mere empty phrase.

This last consideration, even if there were no other objection to Dr. von Wieser's method seems to me decisive against it. On his plan it becomes impossible to estimate cost of production in the broad sense in which it is connected with human welfare and progress. The reduction of cost that has been effected by general improvements in the arts of production, finds neither expression nor recognition in his vocabulary. How, for example, does he propose to express the fact that all commodities are lower in cost to-day than they were a century ago? He cannot say that men get commodities with less labor now than they did then, and therefore cost has been reduced; for he makes the "value of labor" the constituent of cost, and the value of labor has risen as its product has increased. On reflection he must perceive, I think, that his procedure fails to recognize cost in its true form. What he has chosen to dignify with the name of cost of production is in reality, on the most favorable interpretation, only a sort of disguised form of employer's cost. At best it can give but a clue to the present comparative costs of the various commodities to the employers who carry on the final stage in each productive process. What these pay out for labor, materials and machinery, has indeed reference to costs endured by those to whom the

payments are made ; but to confound these payments with the true elements of cost which they reward, is in my judgment, only to introduce confusion into the very heart of our science.

Professor von Wieser thinks it a fatal defect in the classical treatment of cost that it makes no mention of capital, or the consumption of capital as an item of cost distinct from the requisite labor and waiting (or abstinence). He argues that, since we have the use of old capital even in procuring the materials wherewith to make new capital, we cannot eliminate the factor "capital" from the computation of cost. But I fail to see the force of his objection. Classical economists agree in regarding the cost of capital as a part of the cost of the commodities it helps to produce. Dr. von Wieser, I venture to believe, will not contend that this is an erroneous proceeding. The only question, then, is as to the proper mode of including this portion of the total cost of commodities. Dr. von Wieser would have us mention it specifically as an item of cost different from, and in addition to, the requisite labor and waiting. A little reflection will convince him, I think, that there are decisive reasons against that course. When the classical economist has named the necessary labor as an element of cost, he is bound to include all the necessary labor from the beginning to the end of the productive process. Now the requisite capital being itself produced by labor, and this labor being already included in our definition under its own proper name of necessary labor, we would be guilty of double counting if we named the capital also as an element of cost, over and above the necessary labor. That seems conclusive against Dr. von Wieser's proposition. Further, if we introduce capital as a special item of cost, there is really no natural limit to the application of the principle, short of the whole cost of things. For is not every part and stage of every productive process a use, a consumption, of capital? Is not every device of production, and exchange, every material, every half-wrought product—is not even every finished commodity while still in the course

of transportation and exchange—capital? If so, how can we possibly speak of the use of capital as an item of cost distinct from, and in addition to, the necessary labor and waiting of production? Is not capital the very product and necessary result of the labor and waiting? Is it not the mark and interim pledge of the coming enjoyable return for labor expended? Do not the Austrian economists themselves treat it so? How then, I repeat, shall we escape mere absurdity, if, in spite of all that, we set down capital as an independent item of cost, as if it somehow included something that has not been produced by human labor and waiting?

Dr. von Wieser apparently thinks the classical definition of cost requires that the capital now in use should have been produced by the men of to-day without the aid of previous capital. This is a misapprehension of the definition, since those who hold it have never so understood it. If it be granted that all capital, whether new or old, is a product of human industry, the definition carries its own justification. The capital now in use is undoubtedly, to a large extent, a product of the labors and waitings of past generations of men; but it is none the less a product of labor and waiting. No sane person contends that those who provide capital are always those who enjoy the resulting product or even the greater part of it. Each successive generation has the enjoyment of commodities whose cost was largely borne by preceding generations; and, in its turn, it expends much of its own labor in ways that yield their chief returns to a succeeding generation. But these facts, so far from being in conflict with the classical definition of cost, seem only to supply an illustration of its main principle. Dr. von Wieser's difficulty is probably due to his assuming that classical economists reduce cost to labor alone.

The fact that the existing capital is largely a legacy from past times, has, I think, no other bearing on the relation of capital to cost than that here indicated. Capital being in all cases merely the result of labor applied to production in

certain ways, it cannot be a new element of cost different from the labor and waiting that produced it. The legacy feature of the case has undoubtedly great importance in other ways ; but it has nothing to do with the agency of capital in diminishing cost, nor with the nature of the cost of capital itself. Its importance lies in the field of so-called distribution. Though all men are enormously benefited by the legacy of capital, the benefits are not equal to all. Those to whom the ownership has come, besides sharing the common benefit of reduced cost of commodities, have, by virtue of their ownership of the capital, a lien on the products of the general industry. This seems to me to be the only important consequence of the history of capital. But the ownership of the industrial outfit has obviously nothing to do with its influence in making industry productive, and so it has nothing to do with cost of production. It affects the "sharing," not the production, of commodities.

For these reasons I cannot but hold that Dr. von Wieser's criticism of the classical doctrine of cost, like his defence of the Austrian substitute for that doctrine, is lacking in conclusiveness.

III. MARGINAL UTILITY *vs.* COST.

We now come to the main question raised by the Austrian economists—the question how the exchange value of commodities is fixed. The classical theory attributes the normal control of value to comparative cost ; the Austrian theory attributes this function to the principle of marginal utility. The new theory does not, indeed, propose to drop the action of cost out of account entirely ; but what its advocates call cost is, as we have seen, nothing but a form of utility. They, of course, see clearly that there cannot be two independent regulators of value, for the two could but rarely coincide in fixing the same value for things. As a way out of the difficulty, they have, in fact, undertaken to show that marginal utility governs the cost as well as the value of commodities. That undertaking can hardly be called successful ;

and until it has been successfully carried out, the adherents of the classical theory might well rest their defence on this point alone. But it is due to Dr. von Wieser that we should examine briefly the precise function of marginal utility in the exchange of products. That it has a function has been made abundantly clear, and the Austrian economists have done a highly valuable service in calling attention to it. Their only mistake has been the natural one of claiming too much for the principle. This mistake they made almost inevitable by their mode of treating exchange of products. They treat exchange as an independent subject—as a transaction entered into for its own sake. They have chosen to make no account of the fact that economic exchange is simply a stage, the closing stage, in production by division of labor. Cutting themselves off in this way from the true explanation of the origin and motives of exchange, they have been obliged to invent for it a cause and a motive which may appear in the act of exchange itself. This they try to do by a comparison of the utilities of the things exchanged to the two exchangers. Each parts with a thing of lower utility to him than the thing he receives; the difference is his “profit” by the transaction, and constitutes his motive for making it. How it happens that men constantly find themselves in possession of things of lower utility to them than the things their neighbors have, would seem to be a question calling for treatment, as the very basis of any theory of exchange. Any discussion of it must disclose the fact that the gain of exchange is not to be found in exchange itself, but in the method of production which makes exchange necessary. The gain is in the increased productiveness that comes by division of labor. It is the gain of having more commodities for our labor, not of having commodities of higher utility to us. That the act of exchange does result in giving each producer an article of higher utility to him than his own product is undoubtedly true; but that is no real explanation of the case, because it asks us to take the

subordinate, incidental circumstance instead of the larger and more fundamental principle that governs the whole proceeding. Exchange can never be properly treated except as a part of the method of production that gives rise to it. Once forget that the nailmaker has made his stock of nails with no other thought than that of getting a general assortment of useful commodities in exchange for them, and you are on a wrong ground altogether. Once off the true ground of his action, you are in danger of inventing wholly unreal motives for him, and of adopting wholly untenable doctrines as to the way in which the terms of exchange are settled.

Precisely this error I think the Austrian economists have fallen into. They practically ignore production in their treatment of exchange. Dr. von Wieser, in his treatise on "Natural Value," expressly states that his purpose is to discuss value as it would present itself if a highly developed community existed without exchange and without price. (p. 37.) For the purposes of his treatment he assumes, provisionally of course, that the supply of each article exists without production (p. 24, note). By ignoring production as the source of supply, he easily arrives at a theory which ignores cost of production as the regulator of value. Now, I have nothing but admiration for the patient skill with which the Austrian economists have worked out the play of human feelings in connection with the acquisition of material commodities. The principle of marginal utility is undoubtedly a most important contribution to economic theory. But it seems entirely clear to me that its authors have been misled as to the precise scope of its action. They attribute to it the power of controlling and determining exchange value, to the practical supersedence of the traditional law of cost. In my opinion, its true function is not at all to fix exchange value, but to limit the demand for each commodity at the value fixed by the cost of producing it. A few considerations will serve to make this plain.

In the first place the principle of marginal utility is simply that our subjective valuation of each commodity, or rather of each additional unit of it, grows less as our supply of the commodity is increased. If a man has but a single coat, he necessarily sets a high value on it ; to lose it would be to lose a great deal of comfort. Give him a second coat ; this, though a highly-prized addition to his possessions, is not of as great utility to him as it would be if he had no other ; the loss of it would not be so great a loss of comfort. A third coat would have still less utility for him than the second ; and so on. By successive additions to his supply of coats you would finally reach a point at which a coat more or a coat less would be a matter of indifference to him. This is the point of satiety. There is thus between the famine, or maximum valuation and the satiety, or zero valuation, a descending scale of utility for each commodity—each point in the scale corresponding to some determinate supply of the article. The application of the utility-scale to the purchase of commodities is, in some respects, entirely obvious. The man who already has two coats will give so much, and only so much, for a third ; if he has already three coats, he will not buy a fourth unless the price falls within his estimate of the utility to him of having a fourth coat. And so of the fifth and the sixth and all higher numbers. For the sake of definiteness, let us assume that all men agree in estimating the utility of coats as follows :

First,	.	.	.	.	.	.	.	\$100
Second,	.	.	.	.	.	.	.	19
Third,	.	.	.	.	.	.	.	13
Fourth,	.	.	.	.	.	.	.	8
Fifth,	.	.	.	.	.	.	.	2
Sixth,	.	.	.	.	.	.	.	0.5
Seventh,	.	.	.	.	.	.	.	0.0

Now, obviously there is nothing in this scale, in and of itself, to tell us anything as to the actual price of coats. It

tells only that the price cannot exceed \$100. In order to establish a particular price, we must know how many coats there are to be sold. If there are so many in the market that, in order to sell all, every man must be induced to buy three, then we can say at once that the price must be not above thirteen dollars. If every man must be induced to buy four, the price cannot exceed eight dollars. But observe the "if." If we could assume, with Dr. von Wieser, that the supply of commodities came to us without production, we should have no hesitation in accepting his theory of value. As, however, there is no way by which men can get commodities except by producing them, it is obvious that production controls the supply. And in order that coats shall be forthcoming to meet the calls of purchasers, it is necessary that some men be induced to produce them.

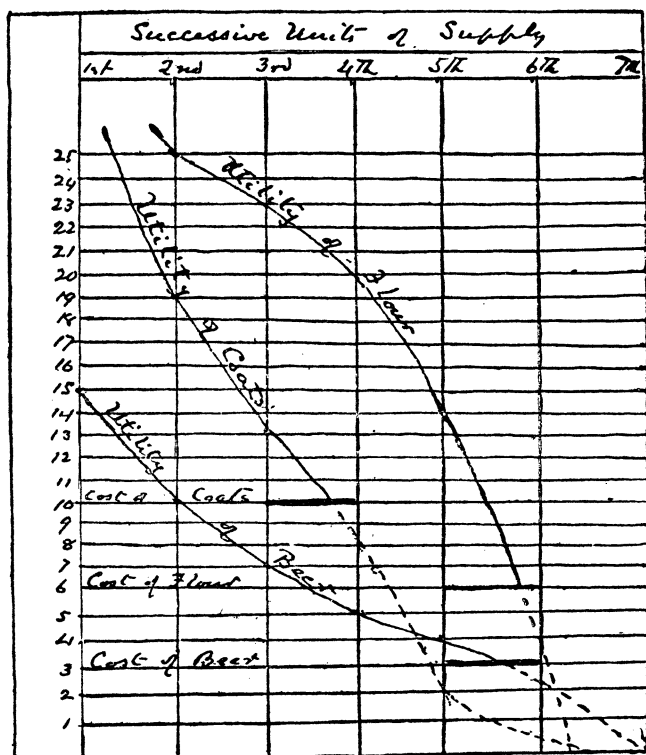
What, then, determines whether each wearer of coats shall be able to obtain only one coat a year at \$100, or two coats at nineteen dollars each, or four coats at eight dollars each. Obviously, nothing but the greater or less difficulty of prevailing on other men to produce them for him. This, again, will depend on the estimate men put upon the whole task of producing coats. In other words, it will depend on what we call cost of production.

Division of labor gives rise to most of the puzzles and misconceptions with which economic theory has to deal. It so complicates every question, that even trained economists may readily lose the true bearing of things. In this matter of marginal utility, the whole difficulty in perceiving the exact function it performs, grows out of division of labor. If every man produced each article directly for the supply of his own wants, I think the whole matter would be clear to everybody. Such a producer would constantly have to answer for himself the question—How much of this thing shall I produce? In answering it, he would have a rather complicated set of considerations to base his decision upon. He would have in mind in the first place, the limits of his

whole productive capacity and the extent and character of his needs. He would wish to apportion his labors among the various sorts of production in such a way as to yield him the largest possible satisfaction—the maximum of utility. In deciding how much of each commodity to produce, he would have of course to balance its utility against that of the other possible commodities, measure for measure. But that would not be all. He would also have to balance its cost, measure for measure, against that of the other commodities. Or, if a different way of expressing it be preferred, he would have to consider not merely the utility of each commodity, but the utility in comparison with the cost: the question being whether, for the necessary cost of it, the given commodity offers on the whole the best return. He would give up producing it and turn to something else, when the point was reached at which he should say to himself, "Things being as they are, I can do better for myself by now devoting my labor to that other article. By the same amount of trouble as would be required for producing another measure of this, I could produce so and so many measures of that other; and this, as I am situated, would be better for me." The point I wish to insist on, is the part necessarily played by cost in the forming of this decision. Without the consideration of cost, in some form, there is really no basis for a decision at all; for, were it not for the obstruction of cost, everybody would carry his supply of every commodity to the point of satiety—in which case all considerations of value and all theories of value would alike disappear.

Those who find diagrams helpful for illustrating a matter of this sort, may perhaps get assistance from the one annexed. It is intended to illustrate the relations of cost and marginal utility in the case of three commodities—two of them necessities and the third in the nature of a luxury. Since our estimate of the utility of each additional unit of any commodity is less than that of the previous units, we may represent the utility of successive units by a descending curve. Cost,

on the other hand, being a constant quantity, may be represented by a horizontal line. The point of marginal utility for the given conditions is found where the utility curve intersects the line of cost. Flour and coats being necessary articles, the utility of the first coat and the first barrel of flour cannot well be expressed. The scale of numbers is



primarily for costs: the unit of cost being a definite amount of labor and waiting: not in the sense that the composition of the unit is identical in all cases, but that, in point of burdensomeness, each is equivalent to every other. The same scale, read downward, may also answer for the units

of utility ; but it must be remembered of course, that for this purpose, they have a wholly different signification.

Suppose, now, that we have the case of a man who has seventy-five units of labor and waiting to be applied to the production of coats, flour and beer ; also let us assume that each coat has a cost of ten units, the barrel of flour six units and the keg of beer three units. Let us further suppose that the curves of our diagram represent truly his estimate of the utility of successive units of the three commodities. From these data, we are enabled to predict that he will produce for himself three coats, five barrels of flour and five kegs of beer ; for by this distribution of his productive power, he will, on our assumptions, produce a greater total utility for himself, according to his own estimate of the respective utilities, than he could by any other selection.*

Two things are to be noted in this example for their bearing on our main problem. In the first place, it is obvious that the man's estimate of the utility of the successive units has not the least effect on the terms of obtaining them : all the units of each commodity cost him alike. Secondly, and I may say consequently, his low estimate of the utility of the last barrel of flour, or of the last keg of

* This is a mere matter of arithmetic. Using the data of the diagram, and adding together the figures indicating the utility and the cost of the successive units of commodity, we have the following results. No other selection yields so large a sum of utility for the same cost. The dotted prolongation of the utility curves gives the data for testing this proposition.

	Utility.	Cost.
Coats, 1st,	?	10
2d,	19	10
3d,	13	10
Flour, 1st bbl.,	?	6
2d "	25	6
3d "	23	6
4th "	20	6
5th "	14	6
Beer, 1st keg,	15	3
2d "	10	3
3d "	7	3
4th "	5	3
5th "	4	3
Total,	155+	75

beer, has not the least effect on the terms he has to submit to in order to get it. The only things determined by his sense of utility are, first, that he desires this last unit of each commodity sufficiently to be willing to submit to the necessary cost in order to add it to his supply; and secondly, that he does not sufficiently desire a further unit of either to be willing to give the necessary cost for it. That is to say, the effect, the only effect, of marginal utility, is to fix the proportional quantity of each commodity to be produced.

Now, carrying over these elementary ideas into our existing industrial system, we may get some help from them in discerning the precise office of marginal utility in connection with exchange of products. It will be admitted, I suppose, that division of labor has no necessary effect on the individual producer's estimate of the utility of commodities. It increases enormously the productiveness of labor: gives each man a vastly greater sum of utility in return for a given outlay of labor and waiting. But I see no reason to suppose that each man's choice of commodities is at all different, under division of labor, from what it would be if he were able to produce all things directly for himself, in the same quantities as he can now procure them by exchange with other producers. The new element in the case affects only the amount and the form of the cost to him of the commodities he seeks to obtain. Cost is indefinitely lessened for him. Secondly, the cost on which his sense of marginal utility is to play, is no longer the very labor and waiting that produce the commodities he uses; for they are produced by others. It is rather the labor and waiting he must bestow in producing the quantity of his own commodity he gives in exchange for them. Therefore, the cost of producing his own product being given, the cost to him of the things he buys depends on the terms of the exchange; in other words, it is a question of exchange value. The cost, then, which must figure in our diagram, is no longer the direct and proper cost of producing flour and coats and beer,

but the cost of acquisition of these commodities to the purchaser.* This being merely another word for the exchange value of these commodities, viewed from the purchaser's standpoint, it follows that their exchange value now takes the place of direct cost in determining the position of the refusal-point in the scale of marginal utility, the point, that is to say, at which the buyer says to himself, "I can do better, as values stand, by buying other things instead of buying any more of this one."

This is a result of the highest importance for our main question. It goes to indicate a wholly different relation between marginal utility and value from that which Dr. von Wieser undertakes to establish. So far from being able to set the exchange value of things by its own independent action, marginal utility in any given case, must rely on the exchange value for its own determination of anything. Cost in some form is necessary as a basis for the sense of utility to operate on, in order to evolve a refusal-point in the demand for each commodity. Otherwise, as already remarked, everybody would push his acquisition of every commodity to the limit of satiety. The Austrian economists seem to me to ignore too much the fact that value in exchange means, for the purchaser, cost as well as utility. They are so preoccupied with subjective value, or utility, that they have too little thought of this other side of the case. In exchange, and from the standpoint of the buyer, value is synonymous with cost; it holds to the buyer the same relation that cost of production does to the producer. This is, at bottom, the reason why exchange value and cost of production are so closely allied.

The normal operation of the principle of marginal utility in exchange would seem to be that each producer should offer his own product, on the basis of equal cost for equal cost, for such quantities of the various other commodities as he would

* On the assumption, of course, that we are not dealing with the case of a man who produces one of these articles.

have wished to produce directly for himself, if that method of production were open to him. He knows that his estimate of the utility of each has no effect on the cost of obtaining it. But, knowing the natural cost, his sense of utility prompts him to have a certain quantity at that cost, through exchange.

Suppose now, that our diagram represents the case of a brickmaker, who wishes to obtain flour, coats and beer. The question we have to answer is this: Why is it ordinarily true that the man can obtain a keg of beer in exchange for the quantity of bricks representing three units of cost, the barrel of flour for the quantity representing six units, and the coats for the quantity representing ten units? The classical theory answers that it is because the natural effort of men to get the best returns they can for their labor and waiting, tends to keep the returns for equivalent quantities of labor and waiting about equal. The Austrian theory avers that it is because the marginal utility of each commodity makes men willing to take, at these values, the whole supply of each commodity offering for sale. If the value were set a little higher some part of the supply would be unsold; if lower, some part of the demand would be unsatisfied.

But this latter answer obviously leaves altogether out of sight the vital question how comes it to pass that the supply of each commodity is so adjusted in amount that the whole product is ordinarily taken at the value that corresponds to cost? It is clearly the adjustment of the supply that makes it possible for the exchange to proceed on that basis. If we take the proper adjustment of supply for granted, we take the whole matter for granted; for if the proportional supply were different, a different point in the scale of marginal utility would come into play for each commodity, and exchange values would cease to correspond with cost. Further, these new values, so far from tending to be corrected by the action of marginal utility, would simply be in accordance with that principle, and, so far as it is concerned, might

remain permanently the exchanging ratios of the commodities. The corrective which restores the terms of exchange to the basis of cost, must surely proceed from the side of cost. The readjustment of values has to be preceded by a readjustment of supply; and, at the sources of supply not marginal utility, but cost, makes itself felt—impelling men, through self-interest, to a course of action that tends to bring values into such relations with each other as to equalize the rewards of equal quantities of labor and waiting.

Now, if the contention of the Austrian economists were merely that in this corrective process, marginal utility plays a part; if their doctrine were simply that men naturally strive to obtain the greatest possible sum of utility in return for their labor and waiting, and that, in determining the direction in which the maximum of utility is to be found, the principle of marginal utility is decisive, there could be no hesitation in agreeing with them. That would not be to claim for marginal utility the power of regulating exchange values. It would only be an assertion of the principle that, given the terms on which commodities may be obtained, marginal utility indicates the relative proportions of the various commodities that would bring the highest sum of utility in return for a given quantity of labor and waiting. The new doctrine seems to go far beyond this, and to assert that marginal utility not only settles how much men want of the several commodities on any given terms, but also has the power of fixing the terms themselves, on which each commodity may ordinarily be obtained. It seems to aver that the fundamental reason why the normal exchange value of each commodity is what it is, must be found, not in any comparison of costs, but in the fact that there is ordinarily a last buyer who is just willing to give the normal price for the last unit of the normal supply. So far as it does involve this doctrine, it seems to me to be at variance with sound reason.

The classical theory holds that utility is an essential condition of value, but that neither the utility of the first nor

of the last unit of supply fixes the exchange value. The last unit, like the first, must indeed have a utility great enough to counterbalance the *dis-utility* of the necessary cost; otherwise it would not be produced. The fact that, in the case of the last unit, utility comes to the level of cost, does not affect the terms on which the producer can obtain this or any other unit from nature's sources of supply. Neither, therefore, can it affect the terms on which one man may induce another man to produce this or any other unit for him. The sole consequence of the coincidence of utility with cost, in the case of the last unit, is to *make* it the last. Recurring to our diagram, the position of the classical economists is made plain by observing that so long as the costs of the three articles remain as given, no change in the curves of utility will have any permanent effect on the exchange values. Even if the utility curves were interchanged, the only lasting effect would be to alter the proportional production of the three commodities: one coat would still be equal in value to $1\frac{2}{3}$ bbls. of flour, and $3\frac{1}{3}$ kegs of beer. But, each article keeping its own curve of utility, let the lines of cost be interchanged—coats taking the cost of flour, flour that of beer, and beer that of coats—and we cannot doubt that exchange value will be interchanged also. Coats will fall to the value flour had before, flour to the value beer had before, and beer will rise to the value coats had before. These things being so, how shall we avoid the conclusion that cost, not marginal utility, regulates the exchange value of commodities?

S. M. MACVANE.

Harvard University.